ATLONA

PROFESSIONAL

Atlona HDMI 4 by 1 Switcher

AT-HD4-V41

User Manual

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Introduction

The Atlona HDMI 4 by 1 Switcher is a great product for homes with multimedia systems and not enough source input options. The Atlona switcher supports an Audio Return Channel and an HDMI 100Mbps Ethernet port for HDMI Ethernet Channel (HEC) feature, reducing the amount of wires necessary for compatible systems. The AT-HD4-V41 gives you a high digital performance connection, between four sources and your video display, without signal loss.

Package Content

- HDMI 4 by 1 switcher
- 5v DC power supply adaptor
- IR receiver module
- Remote control
- User Manual

IR Receiver Module

Features

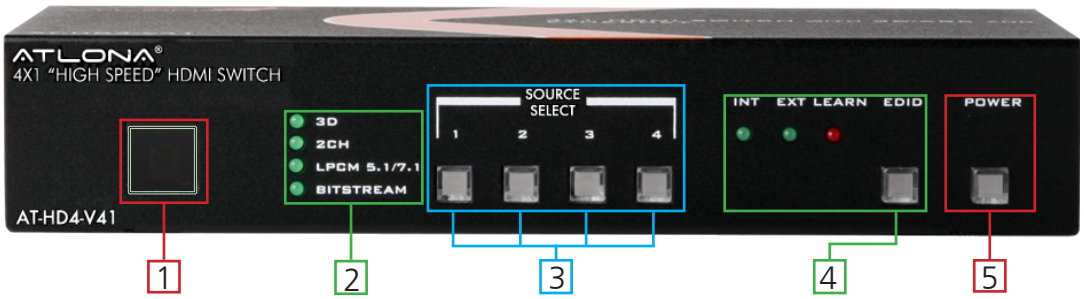
- Four HDMI inputs and one HDMI output
- Smart switching feature with auto-detect for inputs (activated through RS-232)
- Allows for a Bi-directional HDMI Ethernet Channel pass through
- HDMI Audio Return Channel capable
- Supports HDCP
- Supports Deep colors up to 36-bit colors at 1080p 60Hz
- Supports Dolby TrueHD and DTS-HD Master Audio pass through over HDMI
- Digital audio de-embedding through the S/PDIF output

Specifications

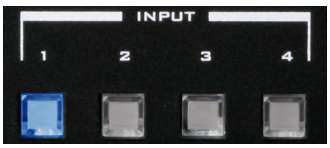
Bandwidth Frequency	6.75Gbps
Input ports	4 HDMI (female type)
Output ports	1 HDMI (female type) 1 Ethernet port 1 S/PDIF port 1 IR 3.5m port
Resolution outputs	Video: up to 1080p Vesa: up to 1920x1200 (Reduced Blanking)
Dimensions	9.5x4.35x2(in) or 240x110x50(mm) - WxDxH
Weight	1.8 lbs or .81kg
Temperature	Operating: 32°F to 104°F or 0°C to 40°C Storage: -4°F to 140°F or -20°C to 60°C
Power Consumption	4.1W

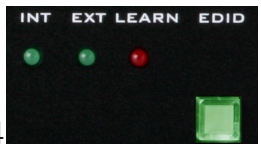
Panel Descriptions

Front Panel



1. Infrared Sensor for the remote control
2. Green LED indicators will light up when receiving a signal status
3. Blue LED input source buttons will light up when selecting a source or on auto-detect
4. Green LED Extended Display Identification Data (EDID) control which will light up when the option is chosen. When pressed longer than 3 seconds a red LED will light up to indicate that the EDID was copied.
5. Red LED will light up when the power is on.

Examples: 3 

4 

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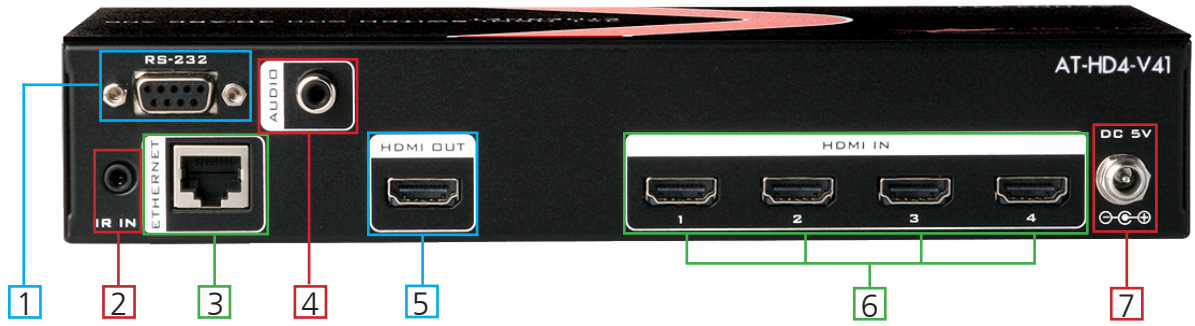
Back Panel

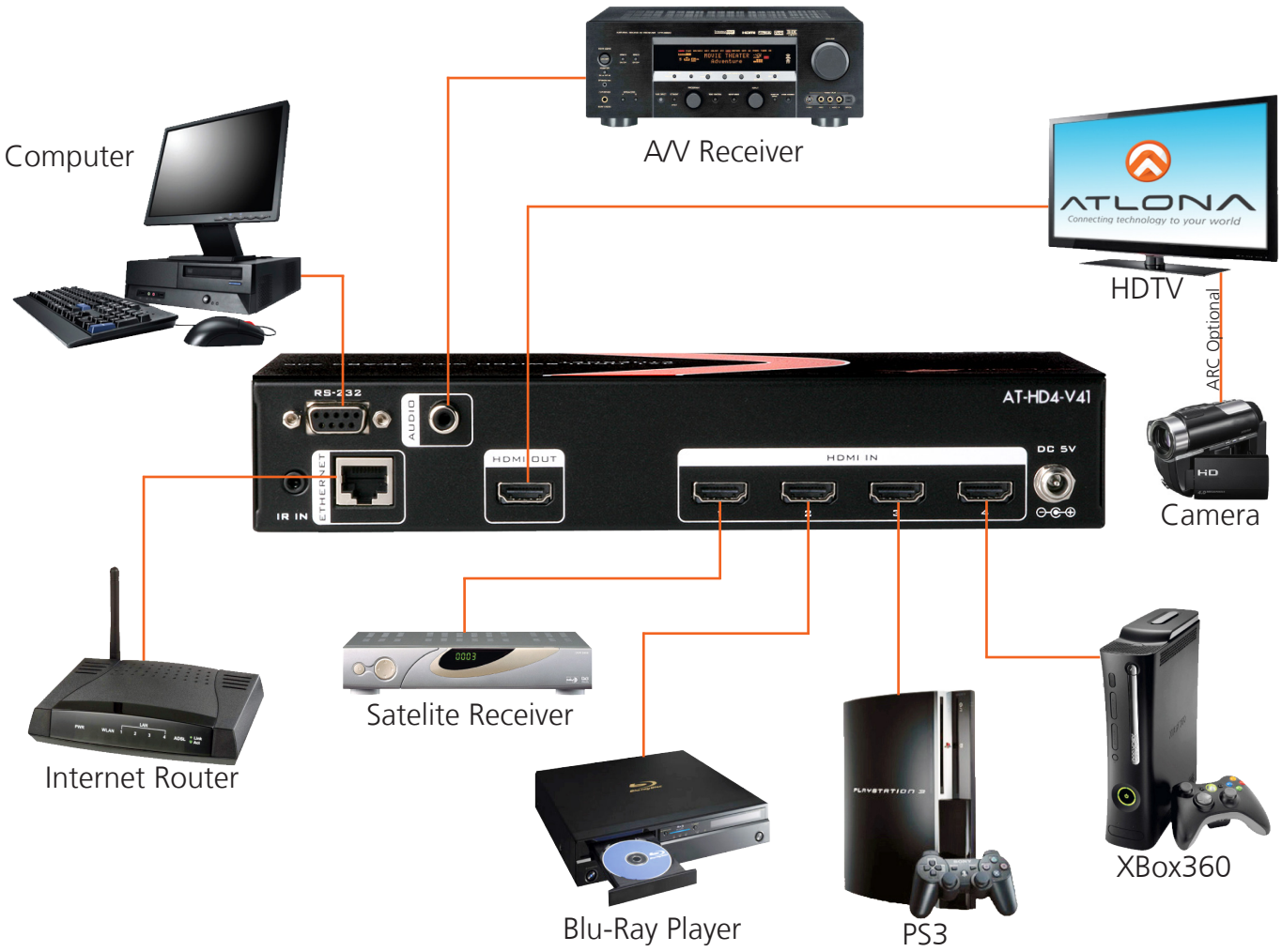


1. RS-232 serial port for PC or 3rd party control.
2. Infrared control in port for included infrared receiver module.
3. Ethernet port for HDMI Ethernet Channel (HEC) capable devices.
4. Digital (S/PDIF) output for digital audio.
5. HDMI output to display.
6. HDMI input for source components such as: DVD, PS3, Xbox360, or computer.
7. Power supply input.

Remote Control

A. On and Off Button
B. Source selection. Press the number that matches the source you wish to use

Connections and Installation



Step by Step Guide

1. Place your switcher within 60 feet (18.29 meters) of your video display.

Note: If using the supplied IR remote control, remember you need to be within 23 feet (7 meters) and within a 60° angle of the infrared receiver.

2. Connect the HDMI cables to your sources and the switcher's inputs labelled HDMI IN.
    a. If the auto switching feature is turned on (through RS-232) the AT-HD4-V41 will change inputs to the source that was powered on last. The source will switch to the previously turned on device when the current input is turned off.

Note: The Ethernet Channel will not pass to your devices if the HEC feature is not supported or you are not using the correct HDMI cables.

3. (Optional) Plug the supplied Infrared module into the IR IN port and place the receiver end somewhere that is within 23 feet (7 meters) of where you will be using remote.

Note: The supplied infrared module will allow you to control the Atlona AT-HD4-V41 when placed in a cabinet.

4. Plug the power cord into the DC 5V labelled port and then plug the other end into the wall.
5. (Optional) Plug the Ethernet cable into the Ethernet port. If your devices and cables are HDMI Ethernet Channel compatible you will be able to pass the internet signal through the HDMI cable.

Note: Please verify that your devices are HDMI Ethernet Channel compatible, most ports will be labelled HEC for easy identification.

6. (Optional) Plug the Digital (S/PDIF) cable into the S/PDIF port. If you have an audio system this will allow for 2 channel and multi-channel support.

Note: If the Digital Audio is plugged in it will take first priority over the HDMI audio connection. Neither Dolby TrueHD or DTS-HD Master Audio will work with this option.

    a. (Optional) ARC Mode – The Audio Return Channel can be accessed through the switcher, by reselecting the source you currently have selected (all source lights will go off). The switcher will then pass through the audio from your video display to your A/V Receiver as an ARC signal (this will only work with ARC capable displays). Your video display will pass through audio from either its internal tuner or from any device plugged into it.

7. Connect one end of the HDMI cable into the video display and the other end into the port labeled HDMI OUT on the switcher.
8. Press the power button (on either the remote or the switcher) to turn on the AT-HD4-V41.
9. (Optional) If using the RS-232 connection plug the cable into the switcher, then your computer or third party control.

Note: You can purchase the RS-232 cable at: http://www.atlona.com/

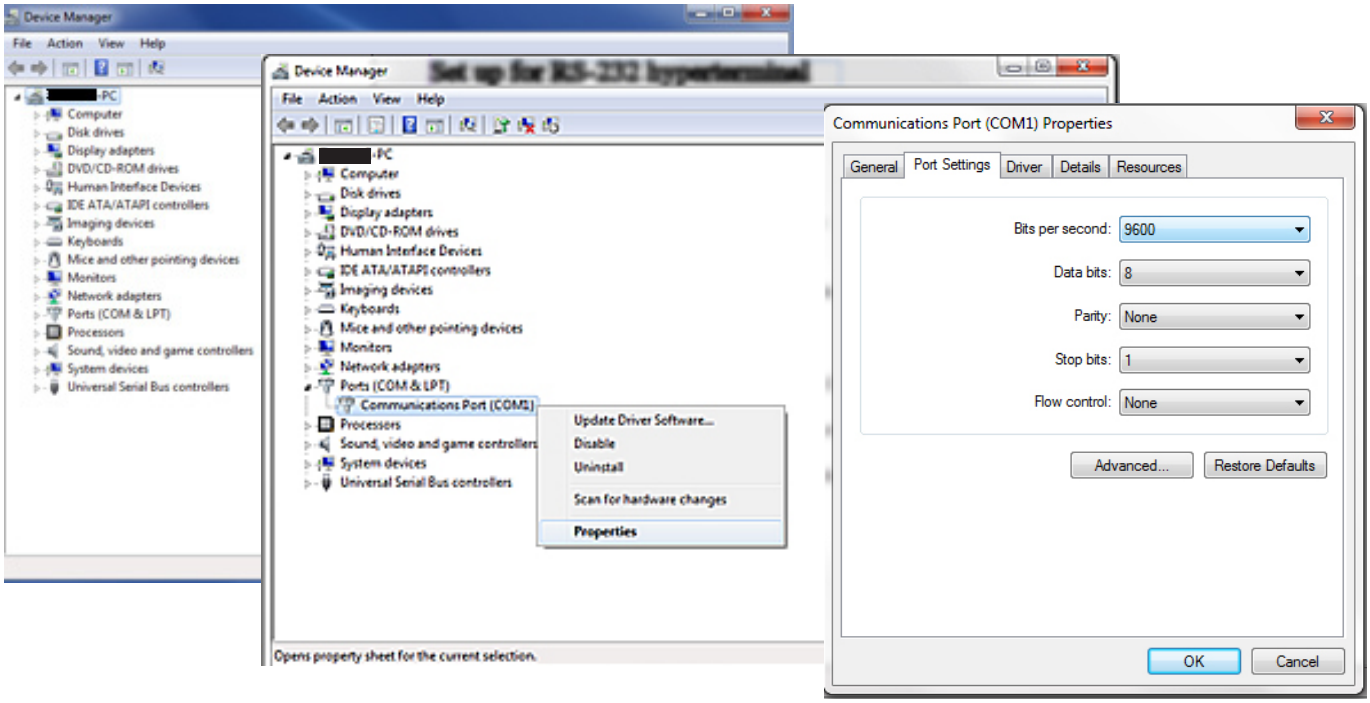
    a. PC control will need a hyperterminal program. If you do not have one then you will need to download or purchase one and follow their instructions for the program's installation.

RS-232

Hyperterminal

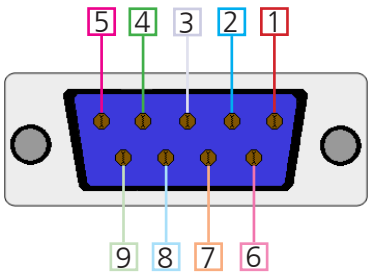
To set up the RS-232 hyperterminal the first thing needed is to find the RS-232 communications port under the computer's device manager. Once there right click the port and select properties. Under the properties menu select the port settings tab and update the menu to the switcher default:

Bits Per Second: 9600, Data Bits: 8, Parity: None, Stop Bits: 1 and Flow Control: None.



Connection

RS-232 is connected through a 9-pin female D connector. The pins will have functions associated with them, some will be unassigned.



No.	Pin	Function
1	----	Not used
2	Tx	Transmit
3	Rx	Receive
4	----	Not used
5	Gnd	Ground
6	----	Not used
7	----	Not used
8	----	Not used
9	----	Not used

Command

The command codes are very sensitive, do not change capitalization, spacing, or lettering.

Command	Feedback	Description
PWON	PWON	Power on
PWOFF	PWOFF	Power off
x1AVx1	x1AVx1	Route input 1 to the output
x2AVx1	x2AVx1	Route input 2 to the output
x3AVx1	x3AVx1	Route input 3 to the output
x4AVx1	x4AVx1	Route input 4 to the output
AUTOON	AUTOON	Turns the auto switching feature on
AUTOOFF	AUTOOFF	Turns the auto switching feature off
Status	x1AVx1	Displays which input is currently connected to the output
Mreset	Mreset	Returns the switcher to its default settings
VER	V0.91a	Displays current firmware version

Each command or feedback is terminated with a carriage return.
Note: If the command fails or is incorrect the feedback should be "Command FAILED"

EDID ***(Extended Display Identification Data)***

EDID is the exchange of capabilities between a source and display. This handshake ensures the audio and video signals sent are supported by both source and display.

The AT-HD4-V41 has 3 EDID modes. Internal picks the highest common audio/visual signal between the devices and the available supported EDIDs within the switcher. External selects the highest common resolution between the current input and the display. Learned saves the EDID from the current display and locks it to the output.

When switching between EDID modes the unit will need to be power cycled. To power cycle the power cord will need to be unplugged and plugged back in.

Internal EDID

The Internally loaded EDID settings are the most common A/V signals that come standard in most TV displays and computer monitors. The AT-HD4-V41 will pick the highest common resolution between the devices.

External EDID

External EDID is the highest common audio/video signal between the current source device and display. It is useful for devices with uncommon resolutions that are not stored internally. When switching from internal to external EDID modes, press the EDID button so the external LED illuminates, then power cycle the unit. When the AT-HD4-V41 is turned back on it will sync with the display and determine the EDID.

Learned EDID

Learned EDID allows for a display's EDID to be saved to the switcher's nonvolatile memory. To learn the EDID from the display you first need to be in external EDID mode. Once you're in external EDID, power cycle the unit then press and hold the EDID button until the red copy LED illuminates. Power cycle the AT-HD4-V41 again and the display's EDID will be used.

Safety Information

Safeguards

To reduce the risk of electric shock, do not expose this product to rain or moisture

If the wall plug does not fit into your local power socket, hire an electrician to replace your obsolete socket.

Do not modify the wall plug. Doing so will void the warranty and safety features.

This equipment should be installed near the socket outlet and the device should be easily accessible in the case it requires disconnection.

Precautions

FCC regulations state that any unauthorized changes or modifications to this equipment, not expressly approved by the manufacturer, could void the user's authority to operate this equipment.

Operate this product using only the included external power supply. Use of other power supplies could impair performance, damage the product, or cause fires.

In the event of an electrostatic discharge this device may automatically turn off. If this occurs, unplug the device and plug it back in.

Protect and route power cords so they will not be stepped on or pinched by anything placed on or against them. Be especially careful of plug-ins or cord exit points from this product.

Avoid excessive humidity, sudden temperature changes or temperature extremes.

Keep this product away from wet locations such as bathtubs, sinks, laundries, wet basements, fish tanks, and swimming pools.

Use only accessories recommended by Atlona to avoid fire, shock, or other hazards.

Unplug the product before cleaning. Use a damp cloth for cleaning and not cleaning fluid or aerosols. Such products could enter the unit and cause damage, fire, or electric shock. Some substances may also mar the finish of the product.

Never open, remove unit panels, or make any adjustments not described in this manual. Attempting to do so could expose you to dangerous electrical shock or other hazards. It may also cause damage to your AT-HD4-V41. Opening the product will void the warranty.

Do not attempt to service the unit. Disconnect the product and contact your authorized Atlona reseller or contact Atlona directly.

Warranty

Limited Warranty

Atlona Technologies warrants that (a) its products (the AT-HD4-V41) will perform substantially in accordance with the accompanying written materials for a period of 3 years from the date of receipt and (b) that the product will be free from defects in materials and workmanship under normal use and service for a period of 3 years. In the event applicable law imposes any implied warranties, the implied warranty period is limited to 3 years from the date of receipt. Some jurisdictions do not allow such limitations on duration of an implied warranty, so the above limitation may not apply to customers that fall within those areas.

Customer Remedies

Atlona Technologies' and its suppliers' entire liability and Customer's exclusive remedy shall be, at Atlona Technologies' decision, either return of the price paid for the product, repair, or replacement of the product that does not meet this Limited Warranty and which is returned to Atlona Technologies with a copy of the Customer's receipt. This Limited Warranty is void if failure of the product has resulted from accident, abuse, misapplication, or natural occurrence. In example but not limited to: power surges (electrical storms, local power outage), dropping the product (or items on the product), contact with fluids, and physical misconduct (i.e. kicking or punching). Any replacement product will be warranted for the remainder of the original warranty period.

No other warranties

To the maximum extent permitted by applicable law, Atlona Technologies and its suppliers disclaim all other warranties, either expressed or implied, including, but not limited to, implied warranties of merchantability and fitness for a particular purpose, with regard to the product and any related written materials. This Limited Warranty gives customer specific legal rights. Customers may have other rights depending on the jurisdiction.

No liability for damages

To the maximum extent permitted by applicable law, in no event shall Atlona Technologies or its suppliers be liable for any damages arising out of the use of or inability to use this product, even if Atlona Technologies has been advised of the possibility of such damages. Such damages include but are not limited to: special, incidental, consequential, or indirect damages for personal injury, loss of business profits, business interruption, loss of business information, or any other pecuniary loss. Atlona Technologies' and its suppliers' entire liability under any provision of this agreement shall be limited to the amount actually paid by you for the product. Some Jurisdictions do not allow the exclusion or limitation of liability for consequential or incidental damage. The above limitations may not apply to you in such jurisdictional cases.

Atlona Product Registration

Thank you for purchasing this Atlona product. - We hope you enjoy it and will take an extra few moments to register your new purchase.

Registration creates an ownership record if your product is lost or stolen and helps ensure you'll receive notification of performance issues and firmware updates.

At Atlona, we respect and protect your privacy, assuring you that your registration information is completely secure. Atlona product registration is completely voluntary and failure to register will not diminish your limited warranty rights.

To register go to: http://www.atlona.com/registration